

## EXECUTIVE SUMMARY

### STANDING DESKS: AN INNOVATIVE CLASSROOM SEATING SOLUTION

#### PROPOSED INITIATIVE

"Provision of an exemplary educational system that inspires all learners to achieve excellence" is the goal of District 000 of City, State. Special Education Services in District 000 strive to meet this same goal in the diverse population of students that they serve. The educational needs of these students vary in cognitive, physical, and emotional ways. No matter what the diagnosis or the issue that each student has, all these students share the critical need to have proper seating and positioning to be successful in the classroom. A new intervention which is becoming popular in the classroom is the **standing desk**. A standing desk provides comfortable, ergonomically correct positioning and may help improve attention, focus, and behavior. The **Standing Desk** may revolutionize the way students position themselves in the classroom to optimize their success.

#### TARGET POPULATION

Students with IEPs who have not responded to traditional or other adapted seating interventions will be the target population. These include students who are overactive and "just can't sit still", students who are disruptive, and students who are underactive and need arousal to attend and focus.

#### GOAL

**The goal of this grant is to provide standing desks to students with IEPs who may benefit from alternate seating to improve their academic progress or classroom behavior.**

#### PERFORMANCE MEASURES

Each student's data will be interpreted individually to determine if a standing desk was beneficial for them. Students will need to have a 25% improvement in their individual criteria for standing to be deemed beneficial. Then the students will be evaluated as group to determine if 40% of the students had an improvement of at least 25% with their individual criteria.

**This project will be deemed successful if 40% of the students show improved classroom focus or behavior from utilizing the standing desk.**

#### PLAN OF ACTION

Students with IEPs will be selected to participate in this project by their teacher. They must be using adapted seating currently which is not producing the desired results or have used seating interventions in the past which were not successful. The teacher will determine the criteria on which the student will be evaluated. This criteria will relate to an IEP goal or objective. Data will be taken over a 5 week period with both a conventional sitting classroom desk and a standing desk. Data will then be analyzed by a team that has not been involved in the project including a teacher, occupational therapist, and physical therapist.

## **PURPOSE/NEEDS STATEMENT**

"Provision of an exemplary educational system that inspires all learners to achieve excellence" is the goal of District 000 of City, State. Special Education Services in District 000 strive to meet this same goal in the diverse population of students that they serve. The educational needs of these students vary in cognitive, physical, and emotional ways. No matter what the diagnosis or the issues that each student has, all these students share the critical need to have proper seating and positioning to be successful in the classroom. Personalized, appropriate seating can improve student's academic performance and physical comfort at school. Each student has a right to have the best seating available so that they perform their school functions at their highest possible level.

Conventional seating interventions have included such items as seat cushions, footrests, ball chairs, and hand fidgets but many times these are not enough to make a difference in students focus, attention, or behavior. A new intervention which is becoming popular in the classroom is the **standing desk**. A standing desk is a desk tall enough for a student to stand at with an attached dynamic footrest. A stool is also provided to the student for occasional seating during the day. A standing desk provides comfortable, ergonomically correct positioning and it may help improve attention, focus, and behavior. **Standing desks** may revolutionize the way students position themselves in the classroom to optimize their success.

## **TARGET POPULATION**

Students with IEPs who have not responded to traditional seating interventions are the target group. These include students who are overactive and "just can't sit still", students who are disruptive, and students who are underactive and need arousal to attend and focus.

The desk allows students to stand, be more alert, and to fidget with their feet on the dynamic footrest. Use of the footrest is critical as a calming mechanism for overactive or disruptive students and as an arousing mechanism for underactive students.

## **GOAL**

**The goal is to provide standing desks to those students who may benefit from alternate seating to improve their academic progress or classroom behavior.**

The use of the desk will not just be beneficial to the student using the desk but to their classmates and their teachers. The student will be able to attend and focus more easily while standing and releasing their energy in a constructive way. By standing and moving their feet on the dynamic footrest, they will be able to regulate their activity level by either increasing or decreasing the amount of time they spend standing and fidgeting. Their teachers will benefit by not having to interrupt instruction for redirection or reprimands, lessons will proceed more smoothly, and more time can be spent on academics versus discipline. Classmates will also benefit as they will also be able to focus instead of being distracted by those students who "just can't sit still". It is a winning situation for the whole classroom.

## **APPROACH**

### **SELECTION OF STUDENTS**

Students will be selected for a 2 week trial of a standing desk by the following criteria:

- IEP student
- Student has tried conventional seating interventions such as seat cushion, ball chair, hand fidget, or a footrest without the significant improvements
- Student has normal sitting balance which would allow safe stool sitting at standing desk

### **CRITERIA**

The criteria for each student will be individualized and will relate to one of the student's IEP goals. The goal chosen will have a component of increased focus or improved behavior in the classroom.

The criteria will be measured objectively and will be measured when the student is using a traditional sitting desk and a standing desk.

Sample criteria for individual students may include:

- Time on task during silent reading – time eyes are actually on the page in 5 minute period
- Number of lines written during 10 minute daily journal writing
- Number of math items completed on a worksheet in 5 minutes
- Number of bathroom breaks requested during a two hour period
- Verbal or physical outbursts during 20 minutes of direct instruction
- Number of times student leaves his desk area during first 20 minutes of social studies

The teachers will be interviewed to determine if their classroom environment has become more calm, more productive, and if classmates are benefiting from student using standing desk. Although this is subjective, the attitude of the teacher is critical in student success.

### **METHOD**

Data will be collected on the criteria selected before the standing desk is used and after it has been used. The two weeks previous to use, the student will be sitting in a traditional classroom desk and data will be collected in the same way each day at the same time. The student will then be introduced to the standing desk and will use the desk for one week without data collection to account for the novelty factor of using the desk. Data will then be collected for the next two weeks as the student uses the standing desk in the exact manner it was collected during the two weeks prior to the standing desk use.

These quantitative measurements can be taken easily and in a non-subjective way. Classroom assistant will be instructed in the data collecting procedure, leaving the teacher available for

instruction. This assistant will have no knowledge about the project and why the data is being taken so as not to prejudice the results.

## **CURRENT STANDING DESK RESEARCH**

Since standing desks are relatively new to the classroom, most studies to date have focused on the effect they have on childhood obesity with increased calorie consumption. With the current government focus on reducing childhood obesity, grants have been secured to study standing desks in combating childhood obesity. Research has shown that students using standing desk burn more calories than students in traditional sitting desks.

Research related to standing desks and focus and behavior improvement is now ongoing in various universities. A study done at The University of Puget Sound last year found that focus and attention improved with standing desks but this study has not been published yet.

Many teachers and school physical and occupational therapists have experienced first hand the difference a standing desk make in the school life of a student but it is only based on qualitative findings. In the evidenced based environment that is now prevalent in education, it is important that interventions used are researched and proven to be effective. This project may provide some of this evidence.

## EVALUATION

Each student's data will be interpreted individually to determine if the standing desk was beneficial for that student. Then the students will be evaluated as group to determine if the standing desks benefited the group as a whole.

An average will be taken of the daily data accumulated for the two weeks the student was sitting in a conventional desk and the two weeks that the student was utilizing the standing desk. This before and after data will be compared and if there is a 25% positive difference in the data, it will determine that the standing desk has improved the focus or behavior for the student utilizing the standing desk.

Then the students will be compared as a group. If 40% of the students have benefited from the standing desk as noted above, it will be determined that the standing desks were beneficial to the group as a whole.

Teachers will also be interviewed to determine if qualitative changes to their classroom environment have occurred. This input is critical as the teacher's acceptance of standing desks will play an immeasurable role in this intervention's success.

**This project will be deemed successful if 40% of the students see positive results (improvement in their own positive criteria of at least 25%) from using the standing desk.**

There will be other benefits to this project. It will be an individual success story for each of the students who has a 25% increase in their own criteria. For these students, the standing desk will have made a difference in their school life. Just providing access to standing desks for students and increasing teacher familiarity with the benefits of standing desks as a seating intervention will also make this project a success.

## **QUALIFICATIONS/PERSONNEL**

Special Education Department of District 000 is best suited to do this project due to the large number of students enrolled in its various programs and the multitude of needs of these students, many of whom are already utilizing some type of adapted seating.

Teachers of special education classrooms, resource teachers, and school occupational and physical therapist will be the primary sources of referral for those students who may benefit from participation in the Standing Desk project. The teacher will determine which criteria will be selected for each student. Each student will have their own selected criteria. A classroom assistant will be instructed in data collection. The data will be evaluated by a team, unrelated to the project, consisting of a teacher, physical therapist, and occupational therapist.

## **BUDGET**

Standing Desk Conversion Kits, designed by Classroom Seating Solutions, LLC, will be used to convert current classroom desks into standing desks. This Kit is a way to recycle the current classroom desk and is an economical means of providing a standing desk. Stools from National Public Seating Corporation will also be used as they are economical and adjustable so that the correct height stool will be available to each student.

10 Standing Desk Conversion Kits @ \$99.99 each	\$999.90
10 adjustable stools @ \$35.00 each	\$350.00
TOTAL	\$1349.90

## **SUSTAINABILITY**

If student success increases with the use of the standing desk, more desks will need to be secured as the number of students needing the desk increases. The Conversion Kits and stools used in this study are affordable and may be added to the equipment budget for special education each year or to the district's general equipment budget. State and federal grants and private foundations grants may also be available to help purchase more standing desks to help make a positive influence on the performance of students during their school day.