PROMOTING USE OF SELF-MANAGEMENT STRATEGIES IN ADULTS WITH AUTISM SPECTRUM DISORDER AND INTELLECTUAL DISABILITY

STEP iTUP

CSESA
The Center on Secondary Education for Students with Autism Spectrum Disorders

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UNC

FRANK PORTER GRAHAM CHILD DEVELOPMENT INSTITUTE

SINCE 1966

THE UNIVERSITY OF NORTH CAROLINA

TEACCH®

Autism Program

Services Across the Lifespan

INTRODUCTION

- Worked with individuals with developmental disabilities since 2009
- Direct support professional, host home provider, interventionist, instructor, researcher
- Researcher at Frank Porter Graham Child Development Institute and TEACCH Autism Program since 2017

AGENDA

- Objectives
- Autism Spectrum Disorder
- What is CSESA?
- Evidence-Based Practices for Adolescents and Young Adults including Task Analysis and Self-Management
- What is Step it Up?
- Adults with ASD and Intellectual Disability
- Adults with ASD and Physical Activity
- Self-Management and Goal Setting Strategies for Adults
- Questions

OBJECTIVES

Describe	Describe the successes and challenges of using goal setting to promote self-management.
Identify	Identify evidence-based practices that may support individuals to be more independent in self-management.
Use	Use evidence-based practices such as creating self-monitoring checklists to promote self-management strategies.

AUTISM SPECTRUM DISORDER

Autism Spectrum Disorder

Social Communication

Restricted, repetitive patterns

Present in early development

Functioning

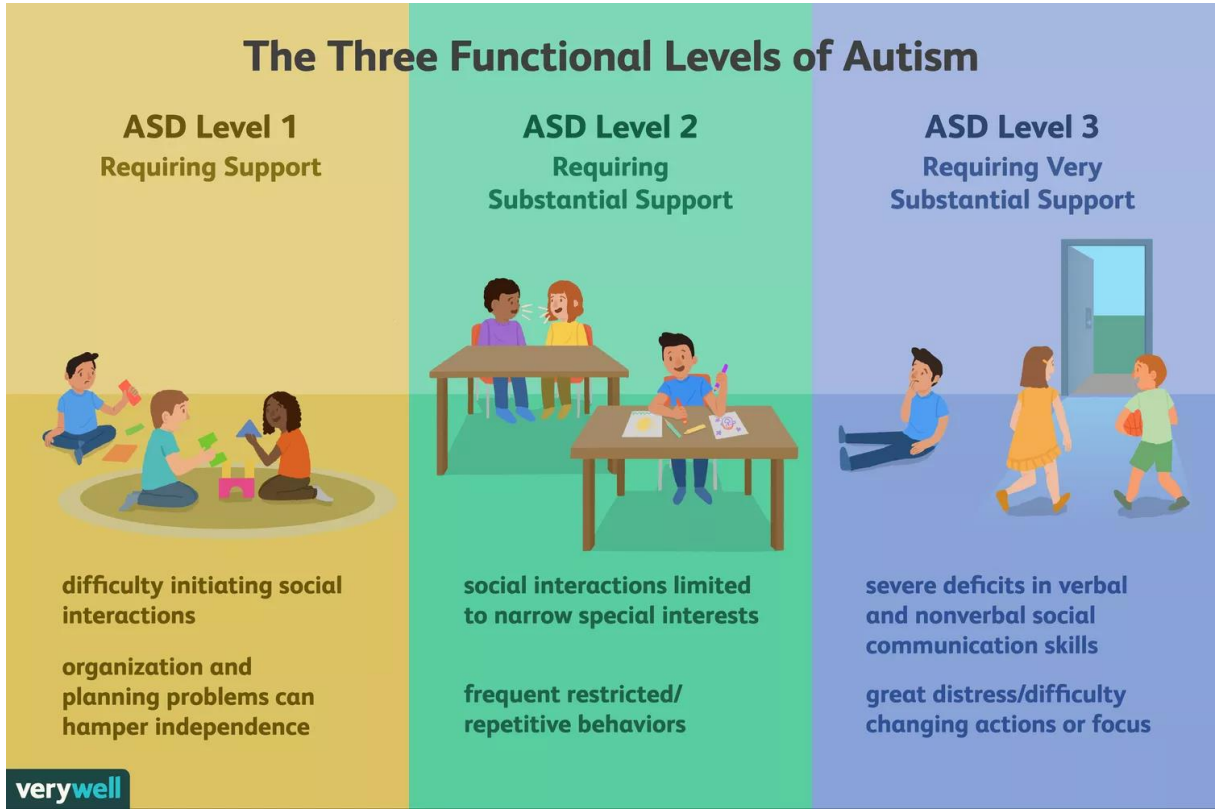
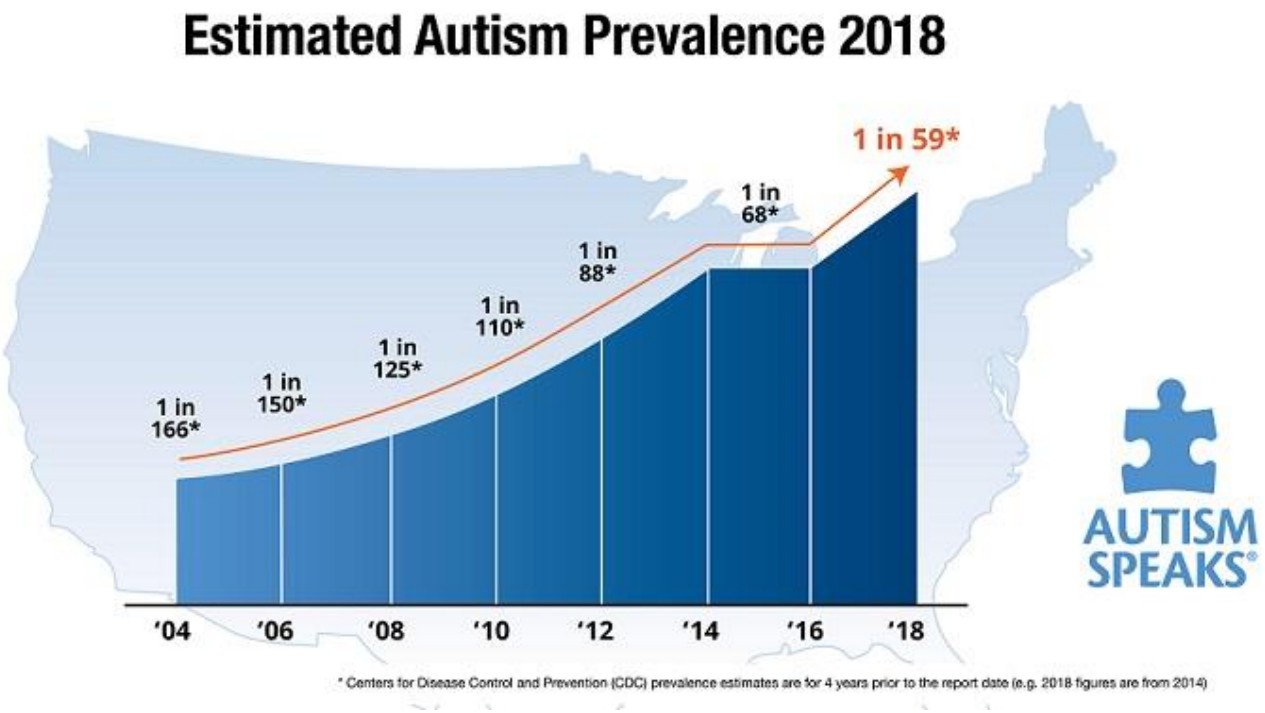
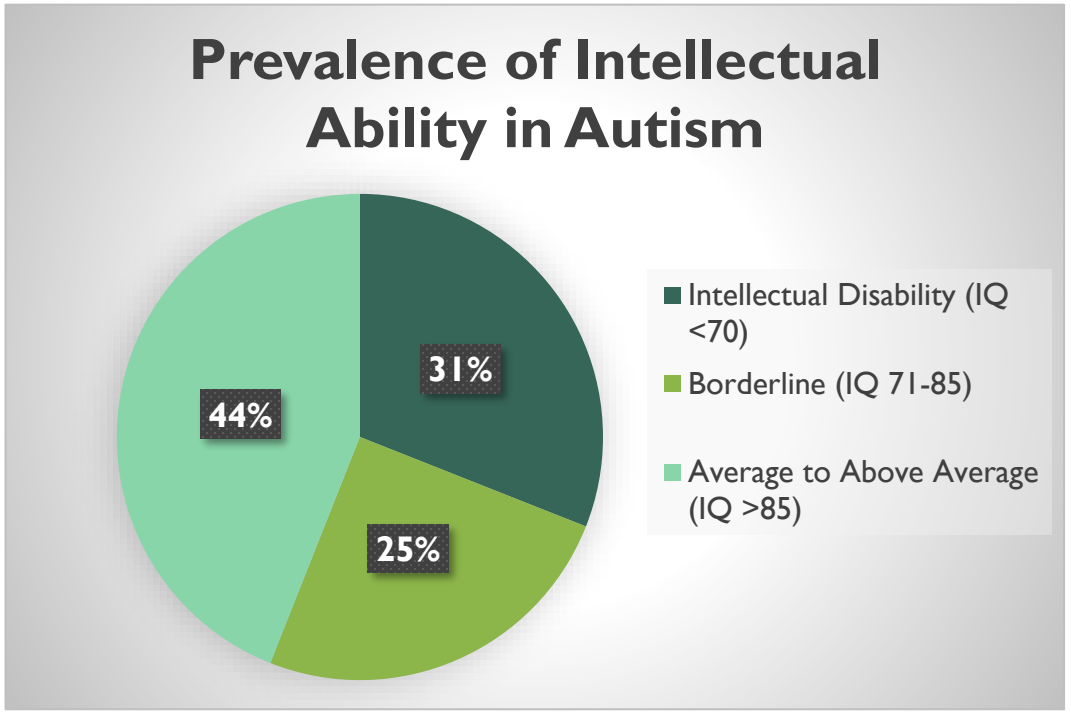


Illustration by Cindy Chung, Verywell.

Source: DSM-5; American Psychiatry Association, 2013.

AUTISM SPECTRUM DISORDER AND INTELLECTUAL DISABILITY





ADDMN, 2012; 2014; Baio et al., 2018; Christensen et al., 2016; Image Source: https://www.autismspeaks.org/sites/default/files/article/image/docs/2018_prevalence_graphic_hero.jpg

CSESA

The Center on Secondary Education for Students with Autism Spectrum Disorders

WHAT IS CSESA?

WHAT IS CSESA?

- Research & Development Center
- Funded by the Department of Education (IES)
- Purpose: To develop and study a comprehensive high school program for students on the autism spectrum

CSESA
The Center on Secondary Education for Students with Autism Spectrum Disorders

THE GOAL OF CSESA

CSESA
The Center on Secondary Education for Students with Autism Spectrum Disorders

To improve post-secondary outcomes for students by using high quality professional development and evidence-based interventions to support practitioners, families, and students

FOR YOUR SUBJECTS
WHEN THEY GRADUATE:

1) SOMETHING TO DO
2) SOMEWHERE TO BE
3) SOMEONE TO LOVE.

GOOD LUCK!!

ORIGINAL CSESA COLLABORATORS

VANDERBILT
KENNEDY CENTER
for Research on Human Development

SAN DIEGO STATE
UNIVERSITY

UNC CHARLOTTE

UC DAVIS
MIND INSTITUTE

UNC
FRANK PORTER GRAHAM
CHILD DEVELOPMENT INSTITUTE

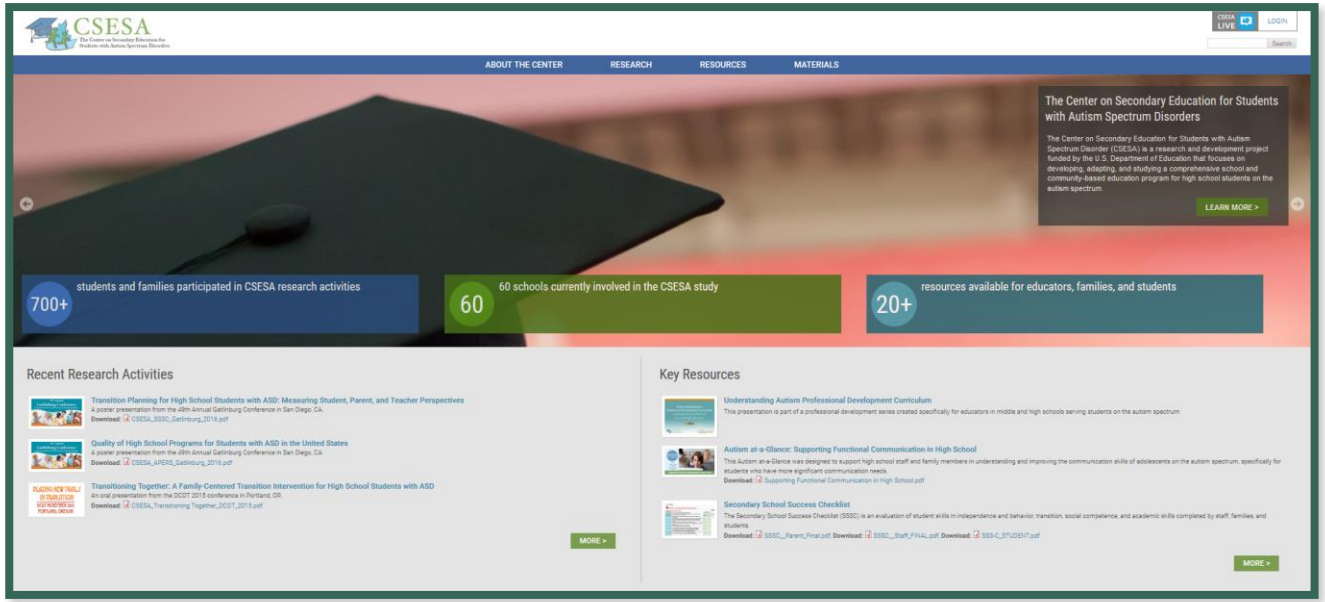
THE UNIVERSITY OF
TEXAS
AT AUSTIN

WAISMAN CENTER
UNIVERSITY OF WISCONSIN-MADISON
University Center for Excellence in Developmental Disabilities

CSESA
The Center on Secondary Education for
Students with Autism Spectrum Disorders

FIND CSESA

http://csesa.fpg.unc.edu/

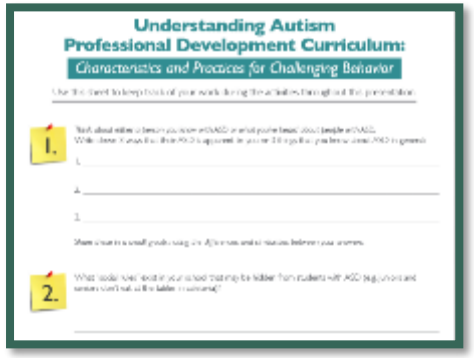


www.facebook.com/csesa.asd

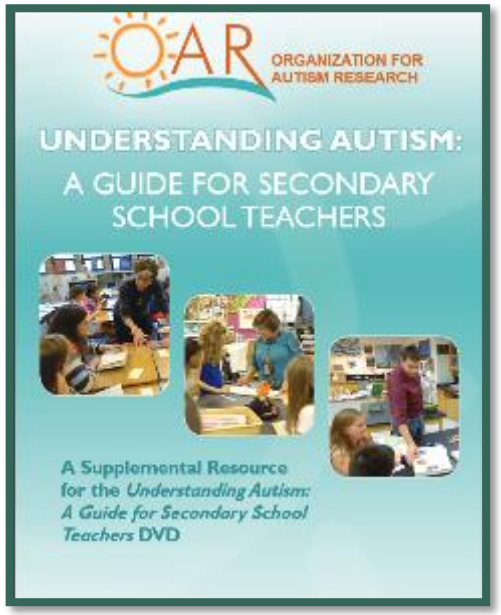
CSESA
The Center on Secondary Education for Students with Autism Spectrum Disorders

CSESA RESOURCES

- Professional Development Series
  - 2 presentations with video, facilitator notes, activities, and handouts
  - Designed for middle & high school general educators

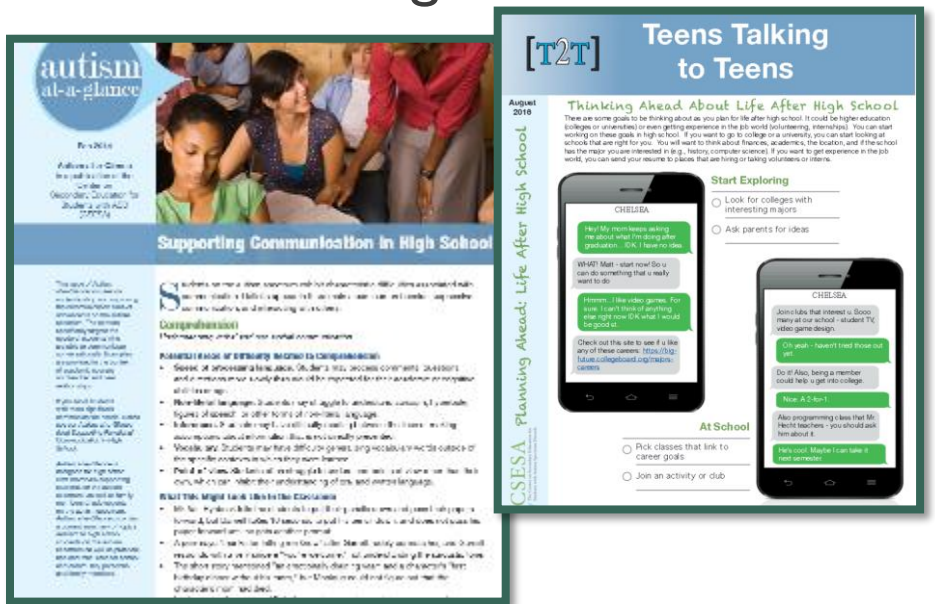


- Understanding Autism Guide



CSESA RESOURCES

- Autism-at-a-Glance Series
  - Tips for families & practitioners
- Teen Talking to Teens



- Special Issue in *Remedial and Special Education* Journal
  - Autism, Adolescence, & High School
  - Articles and Snapshots

EVIDENCE-BASED PRACTICES

The National Professional Development Center on Autism Spectrum Disorder

The National Clearinghouse on Autism Evidence & Practice

NCAEP • BRIDGING SCIENCE AND PRACTICE

AFIRM Autism Focused Intervention Resources and Modules

TEACHING SKILLS

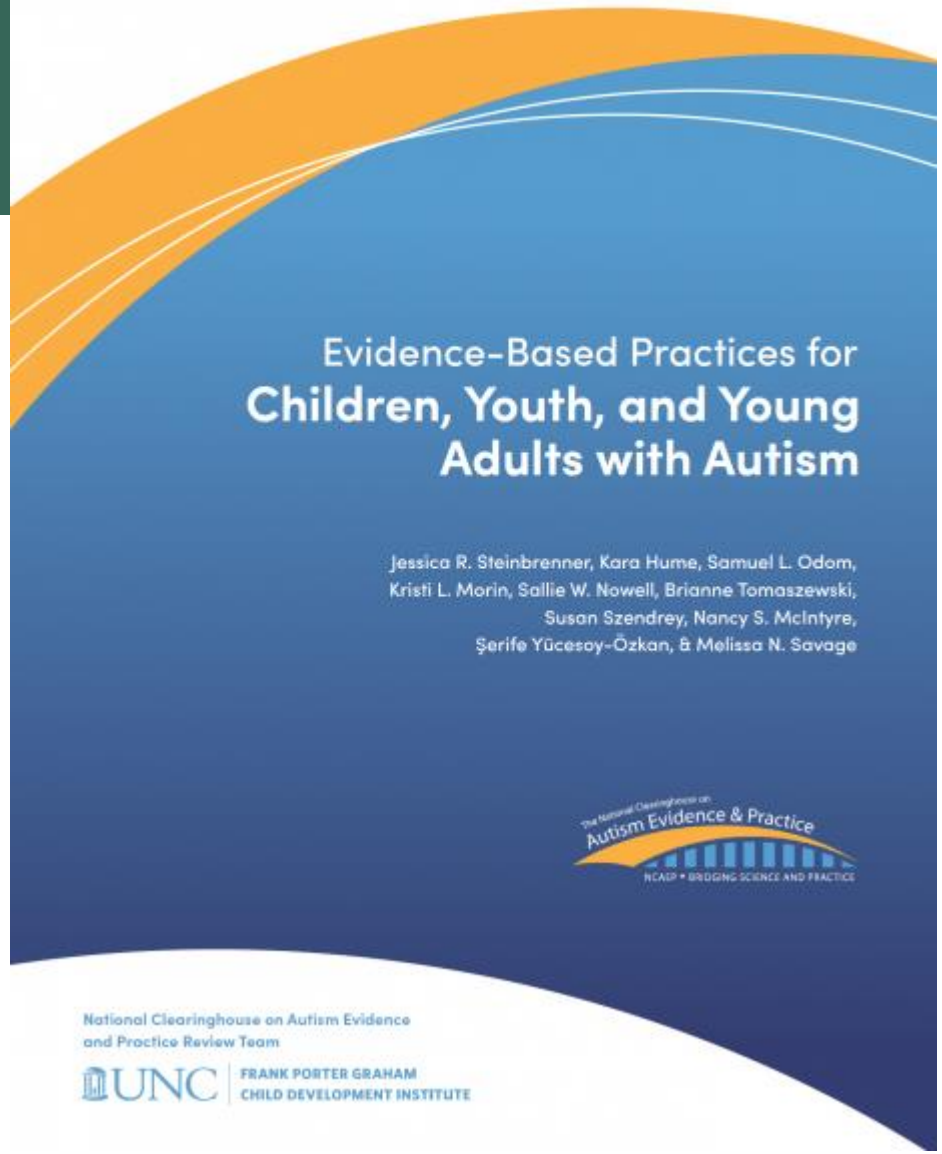
- Use Evidence-Based Practices
  - 28 identified in a recent report by the National Professional Development Center (NPDC) housed at UNC-Chapel Hill

The National Professional Development Center on Autism Spectrum Disorder

  - Online modules released by Autism-Focused Internet Modules (AFIRM)

AFIRM Autism Focused Intervention Resources and Modules

https://afirm.fpg.unc.edu/afirm-modules



https://ncaep.fpg.unc.edu/research-resources

Name of EBP	Self-Management (SM)
Definition of EBP	Self-management (SM) is an intervention package that teaches learners to independently regulate their own behavior. Self-management involves teaching learners to discriminate between appropriate and inappropriate behaviors, accurately monitor and record their own behaviors, and reinforce themselves for behaving appropriately. Although learners may initially require adult support to accurately record behaviors and provide self-reinforcement, this support is faded over time. Self-management is often used in conjunction with other evidence-based practices including technology-mediated interventions, modeling, video modeling, and visual supports.

Outcome Areas		Age Ranges: 0-2 Toddlers	3-5 Preschoolers	6-11 Elementary School	12-14 Middle School	15-18 High School	19-22 Young Adults
	Communication			✓			
	Social		✓	✓	✓		
	Joint attention						
	Play			✓	✓		
	Cognitive						
	School readiness		✓	✓	✓	✓	✓
	Academic/ Pre-academic		✓	✓			
	Adaptive/ self-help				✓	✓	
	Challenging/ Interfering behavior		✓	✓	✓	✓	
	Vocational				✓		✓
	Motor						
	Mental health						
	Self-determination			✓	✓		

The National Clearinghouse on Autism Evidence & Practice

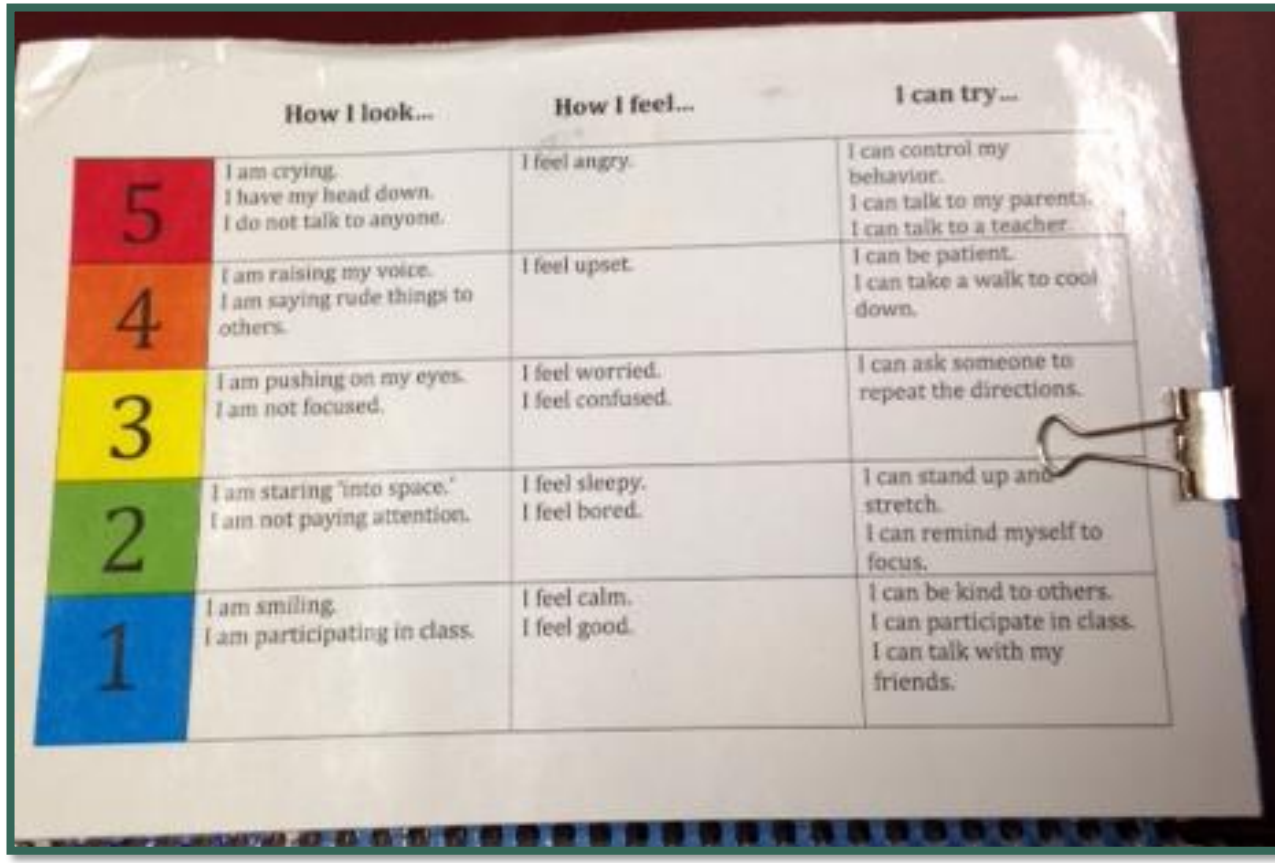
NCAEP • BRIDGING SCIENCE AND PRACTICE

Self-Management (SM) Instruction focusing on learners discriminating between appropriate and inappropriate behaviors, accurately monitoring and recording their own behaviors, and rewarding themselves for behaving appropriately.

(Steinbrenner et al.., 2014)

SELF-MANAGEMENT: THE BASICS

- Purpose
  - Encourage self-awareness and independence related to skill performance
- Implementation
  - Select a target behavior, develop a data collection system, and select reinforcers
  - Teach behavior (correct vs. incorrect)
  - Teach to use data collection and support as needed



	How I look...	How I feel...	I can try...
5	I am crying. I have my head down. I do not talk to anyone.	I feel angry.	I can control my behavior. I can talk to my parents. I can talk to a teacher.
4	I am raising my voice. I am saying rude things to others.	I feel upset.	I can be patient. I can take a walk to cool down.
3	I am pushing on my eyes. I am not focused.	I feel worried. I feel confused.	I can ask someone to repeat the directions.
2	I am staring 'into space.' I am not paying attention.	I feel sleepy. I feel bored.	I can stand up and stretch. I can remind myself to focus.
1	I am smiling. I am participating in class.	I feel calm. I feel good.	I can be kind to others. I can participate in class. I can talk with my friends.

Sam and AFIRM Team, 2016 http://afirm.fpg.unc.edu/self-management

SELF-MANAGEMENT

Plan

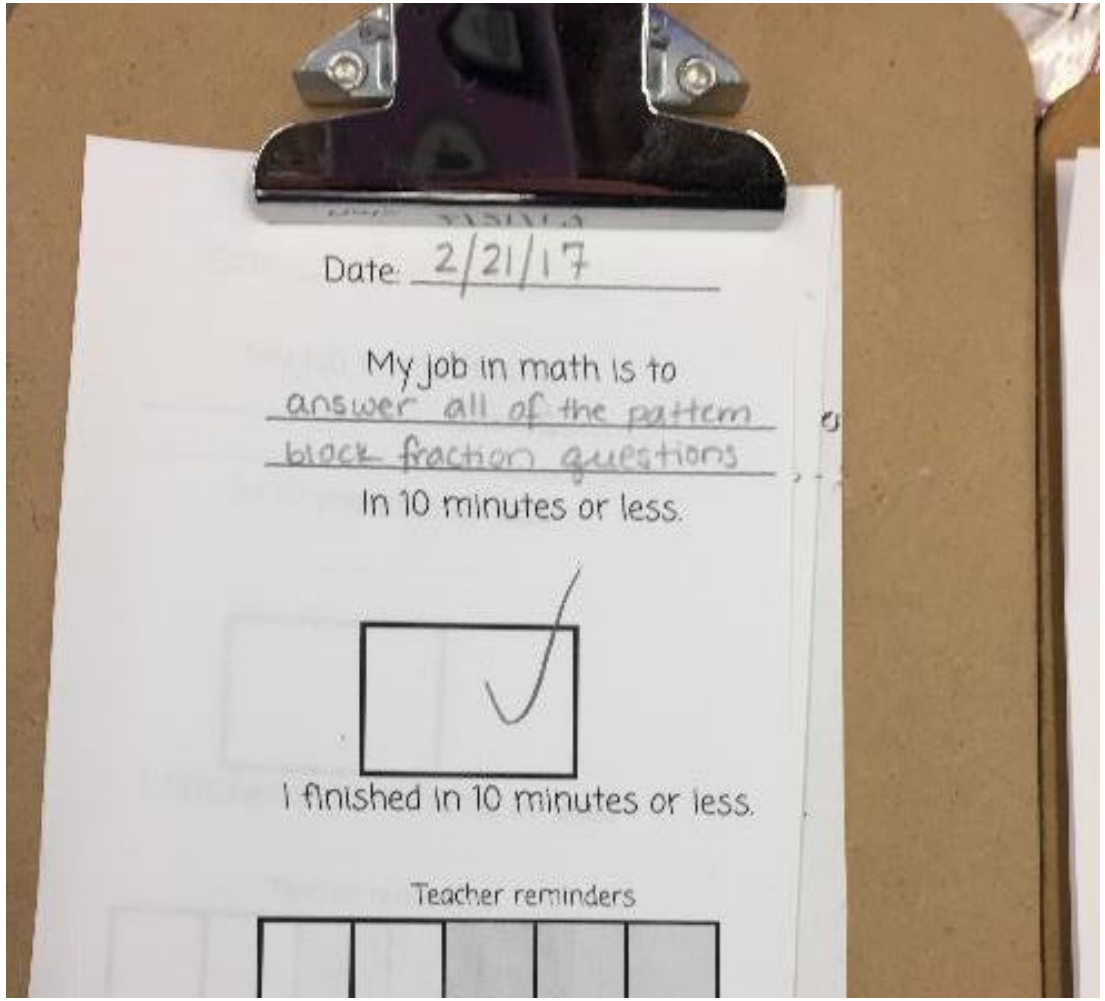
- ID reinforcers
- Develop data collection system
- Determine initial criterion
- Select SM recording and cuing tools
- Teach student correct behavior
- Teach student recording system

Implement

- Provide student with to use SM system
- Teach student how to record behavior in target setting
- Teach student to gain access to reinforcement when criterion is reached

Monitor

- Conduct intermittent checks for accurate self-recording
- Increase criterion, session length, and interval length
- Determine next steps



SELF-MANAGEMENT: IDEAS

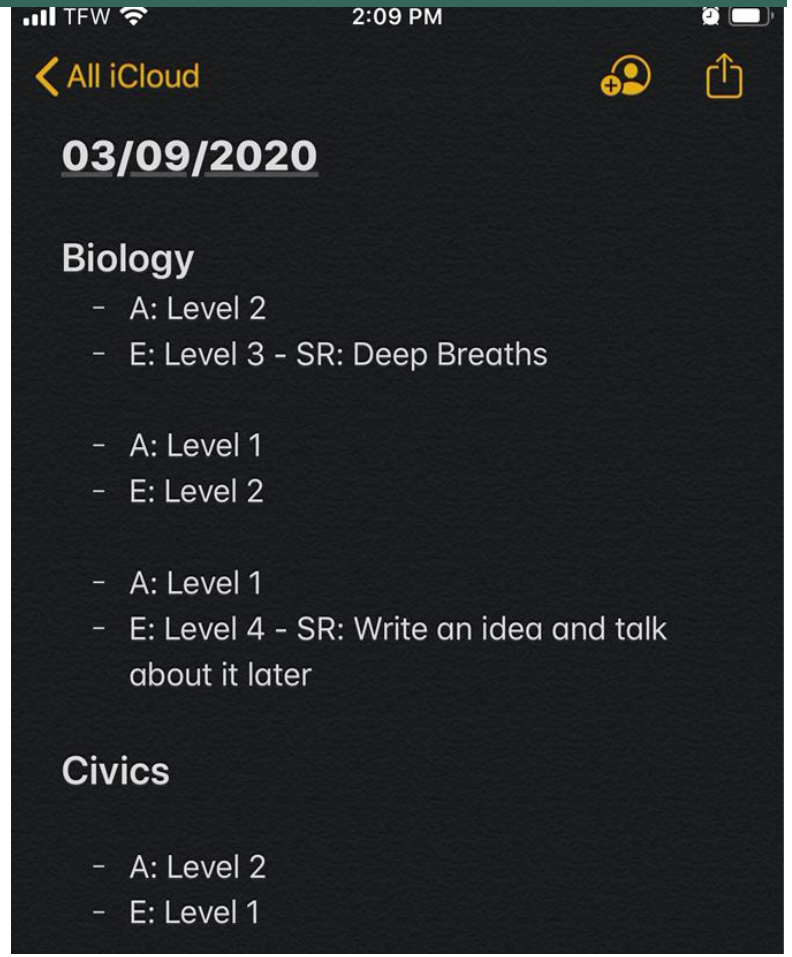
USE PAPER AND PENCIL TO CREATE A SELF-MONITORING SYSTEM FOR TASK COMPLETION

SELF-MANAGEMENT: IDEAS

- Use paper and pencil to create a self-monitoring system for task completion
- Provide examples of calming strategies as part of self-management system

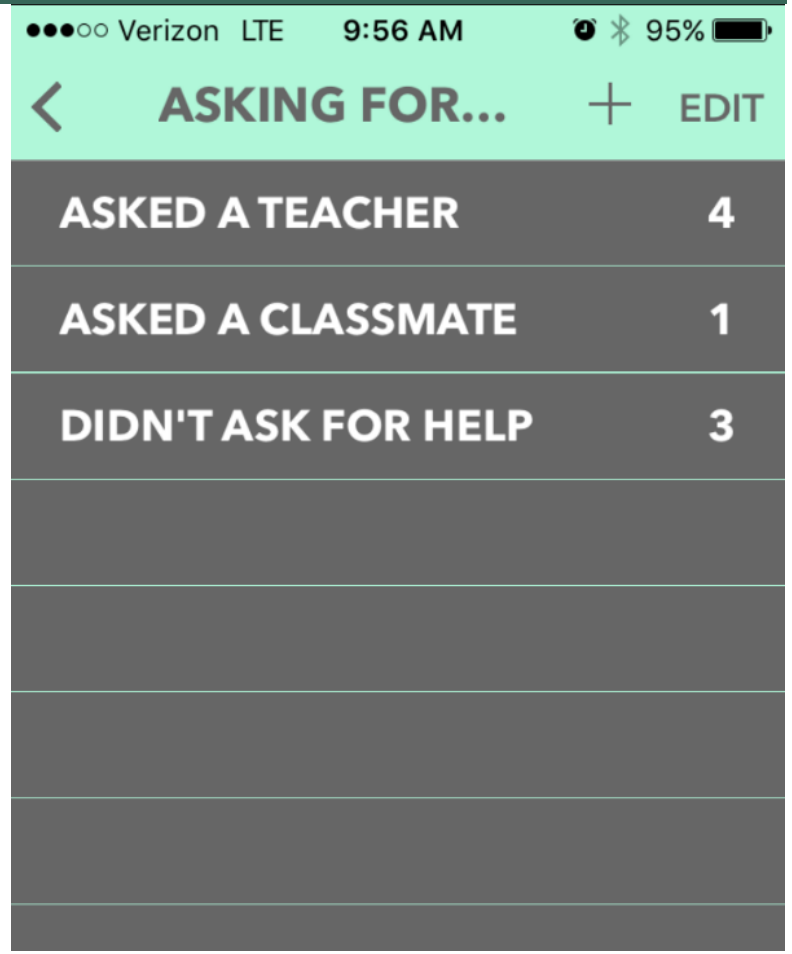
SELF-MANAGEMENT: IDEAS

- Use paper and pencil to create a self-monitoring system for task completion
- Provide examples of calming strategies as part of self-management system
- Use reminder and notes function on phone to monitor anxiety and emotion levels



SELF-MANAGEMENT: IDEAS

- Use paper and pencil to create a self-monitoring system for task completion
- Provide examples of calming strategies as part of self-management system
- Use reminder and notes function on phone to monitor anxiety and emotion levels
- Use an app to track asking for help



SELF-MANAGEMENT: IDEAS

- Use paper and pencil to create a self-monitoring system for task completion
- Provide examples of calming strategies as part of self-management system
- Use reminder and notes function on phone to monitor anxiety and emotion levels
- Use an app to track asking for help
- Use self-management system to encourage class participation

Terry's Academic Schedule **Date: _____**

Subject	Class Intervals (5 min)						Hand Raising Questions
Reading							
Science							
Special (music, art, Spanish, gym)							
Math							
Social Studies							

Comments: _____

ADULTS WITH ASD AND STEP IT UP

WHAT IS STEP IT UP?

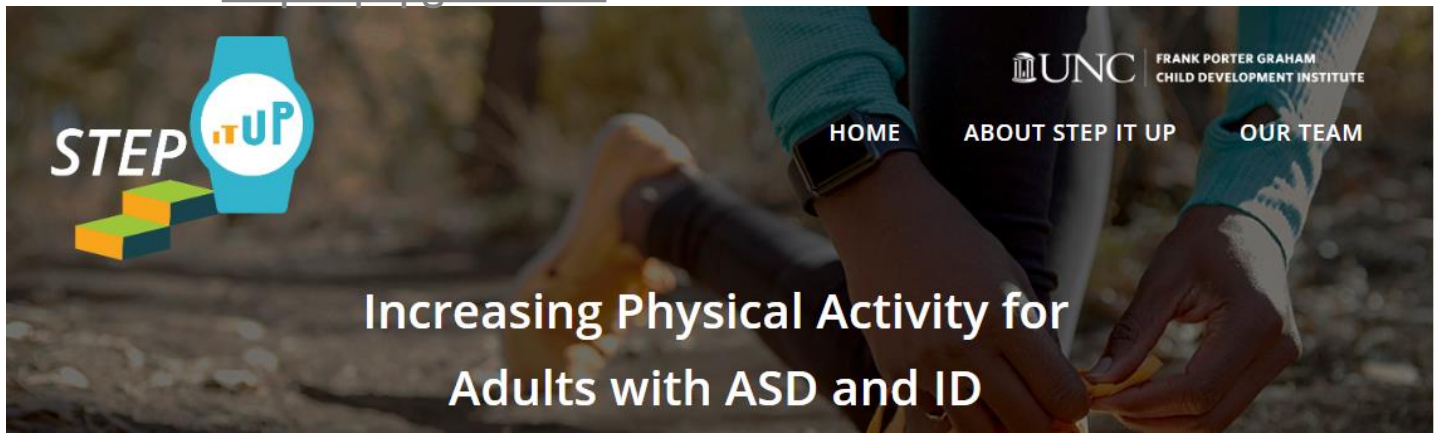
Melissa Savage, PhD

Kara Hume, PhD

Brianne Tomaszewski, PhD

ORGANIZATION FOR AUTISM RESEARCH

Find us at stepitup.fpg.unc.edu!



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STEP
iTUP

ADULTS WITH AUTISM AND PHYSICAL ACTIVITY

- Adults with ASD often **do not engage** in recommended levels of physical activity
- Physical inactivity leads to increased risk for health conditions such as obesity, hypertension, and diabetes
- **Barriers include**
  - Transportation
  - Lack of peer support
  - Lack of energy
  - Need for adult directed support

"He spends a large amount of time on his computer"
-Step it Up Parent

"Sweat and lots of people"
-Step it Up Athlete

"[Exercise is] boring and painful sometimes"
-Step it Up Athlete

"[I don't like] how hard it is"
-Step it Up Athlete

Croen et al., 2015;Eaves & Ho, 2008; Must, Phillips, Curtin, & Bandini, 2015; Nichols, Block, Bishop, & McIntire, 2019; Obrusnikova & Miccinello, 2012; Sorensen & Zarrett, 2014; Photo by Unknown Author is licensed under CC BY-SA-NC

BENEFITS OF PHYSICAL ACTIVITY

- Healthy weight loss
- Reduced anxiety
- Improved Social Skills
- Reduced Stereotyped behaviors

"It gives me something to do to get out of the house"
-Step it Up Athlete

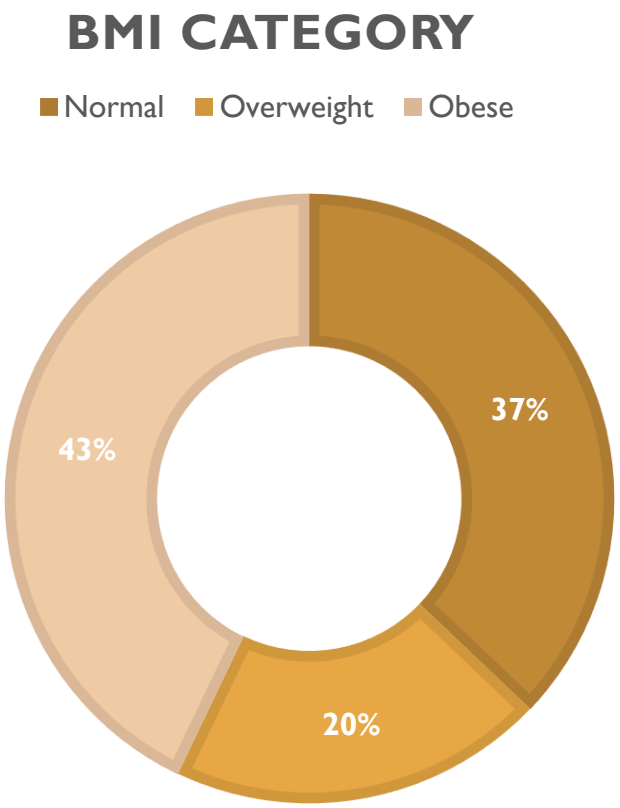
"I like it helps get me moving. It gives me endorphins. Empowering"
-Step it Up Athlete

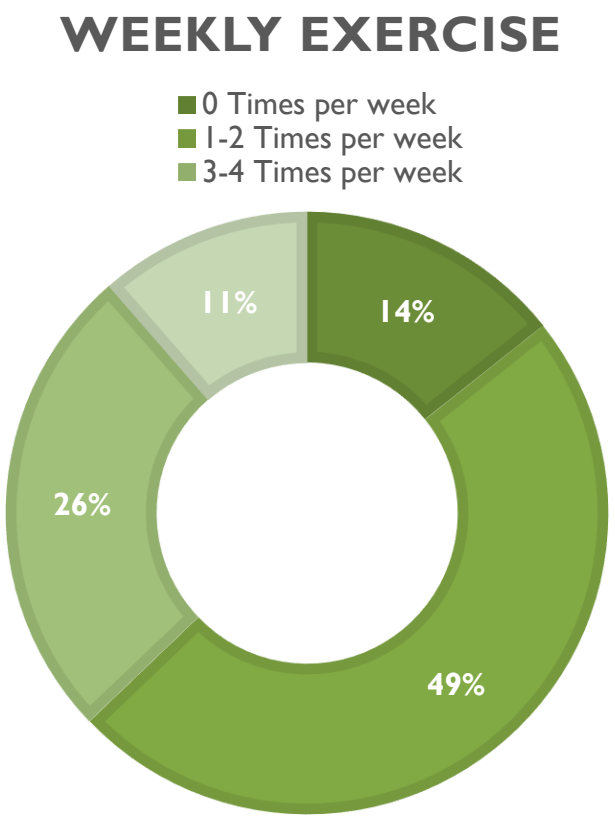
"It's relaxing"
-Step it Up Athlete

(Buchanan et al., 2017; Satanish et al., 2017)

STEP IT UP PARTICIPANTS

Characteristic	M(SD) or %
Age	24.9(6.7) Range 18-47
Gender (% Male)	76.7
Race	
African-American White Multi-Racial Arabic	16.7 66.7 13.9 2.8
Ethnicity (% Non-Hispanic)	91.2
IQ	63.0(21.5)





STEP IT UP RANDOMIZED-CONTROLLED TRIAL

Fitbit + Coaching

- Learn how to use Fitbit
- Wear Fitbit for 12 weeks
- Work with mentor in home or community
- Meet weekly with Coach
- Coach receives training
- Coach trains athlete

Fitbit Only

- Learn how to use Fitbit
- Wear Fitbit for 12 weeks

COACH TRAINING TEACHES EVIDENCE-BASED PRACTICES

- Self- Management Strategies
  - Goal setting
  - Self-evaluation
  - Self-monitoring
  - Self-reinforcement

SELF-MANAGEMENT

GOAL SETTING

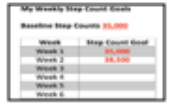
The process of identifying something you want to accomplish and establishing measurable goals and timeframes

What Do I Need for the Goal Setting Meeting?

- My Athlete Binder

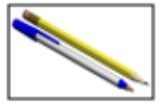
- Goal setting meeting template

- My weekly step count goals form



- Self-monitoring monthly calendar

- Pen or pencil



- How to set a new goal help sheet

- How to record a new goal help sheet

Goal Setting Meeting Weekly Agenda

1. **Answer the question: Did you meet your goal?**

- If yes = calculate new goal and enter the new goal on the weekly step count sheet and on the Fitbit dashboard.
- If no = record why you think the goal was not met and keep current goal, also enter current goal again on the weekly step count sheet. No changes need to be made to the Fitbit.

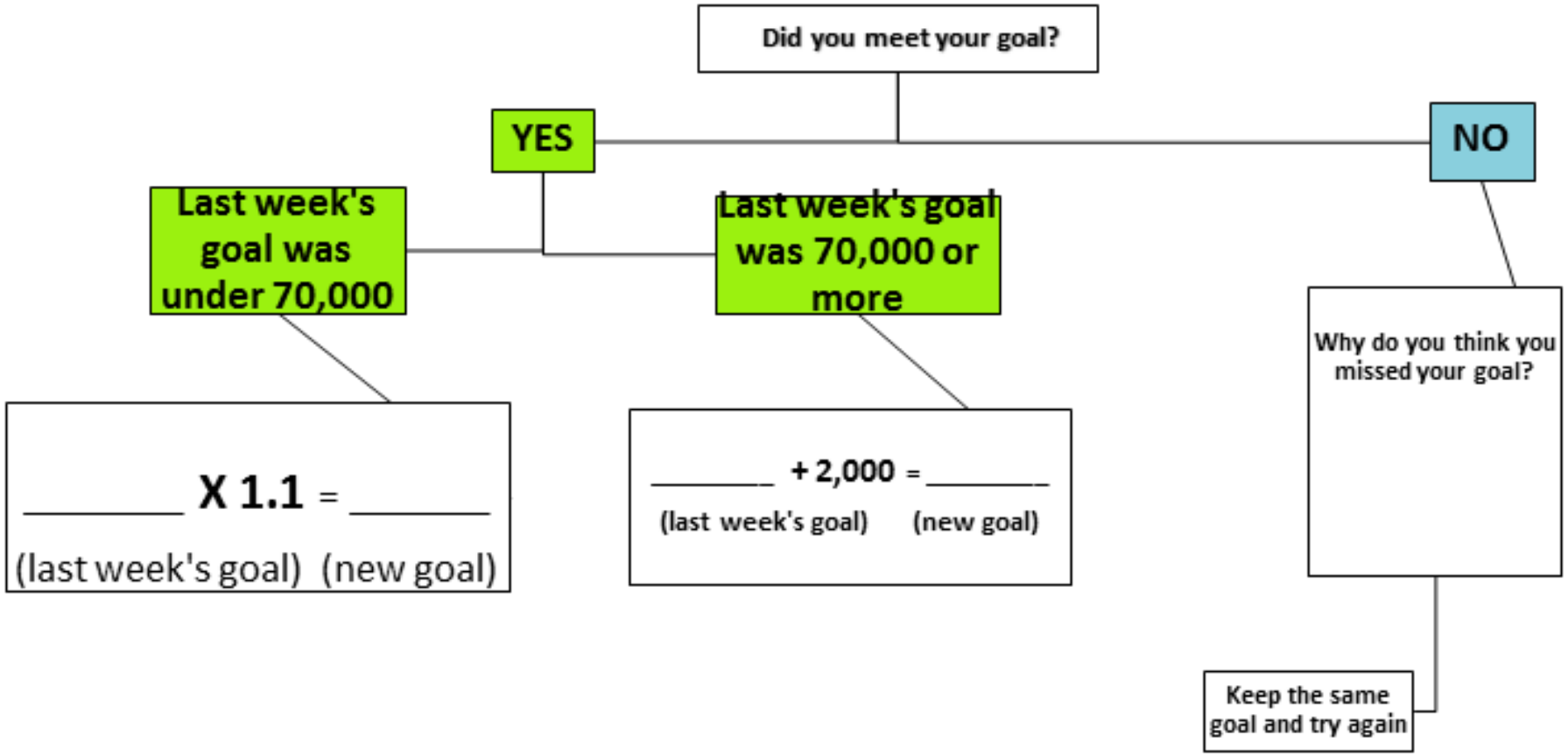
2. **Schedule 2 days and times you can walk or run during the upcoming week**

- Next, choose a couple good times to go walking or running during the upcoming week.

Day _____ Time _____ Day _____ Time _____

3. **Log onto your Fitbit dashboard and enter silent alarms for those days and times**

GOAL SETTING MEETING TEMPLATE



GOAL SETTING MEETING TEMPLATE

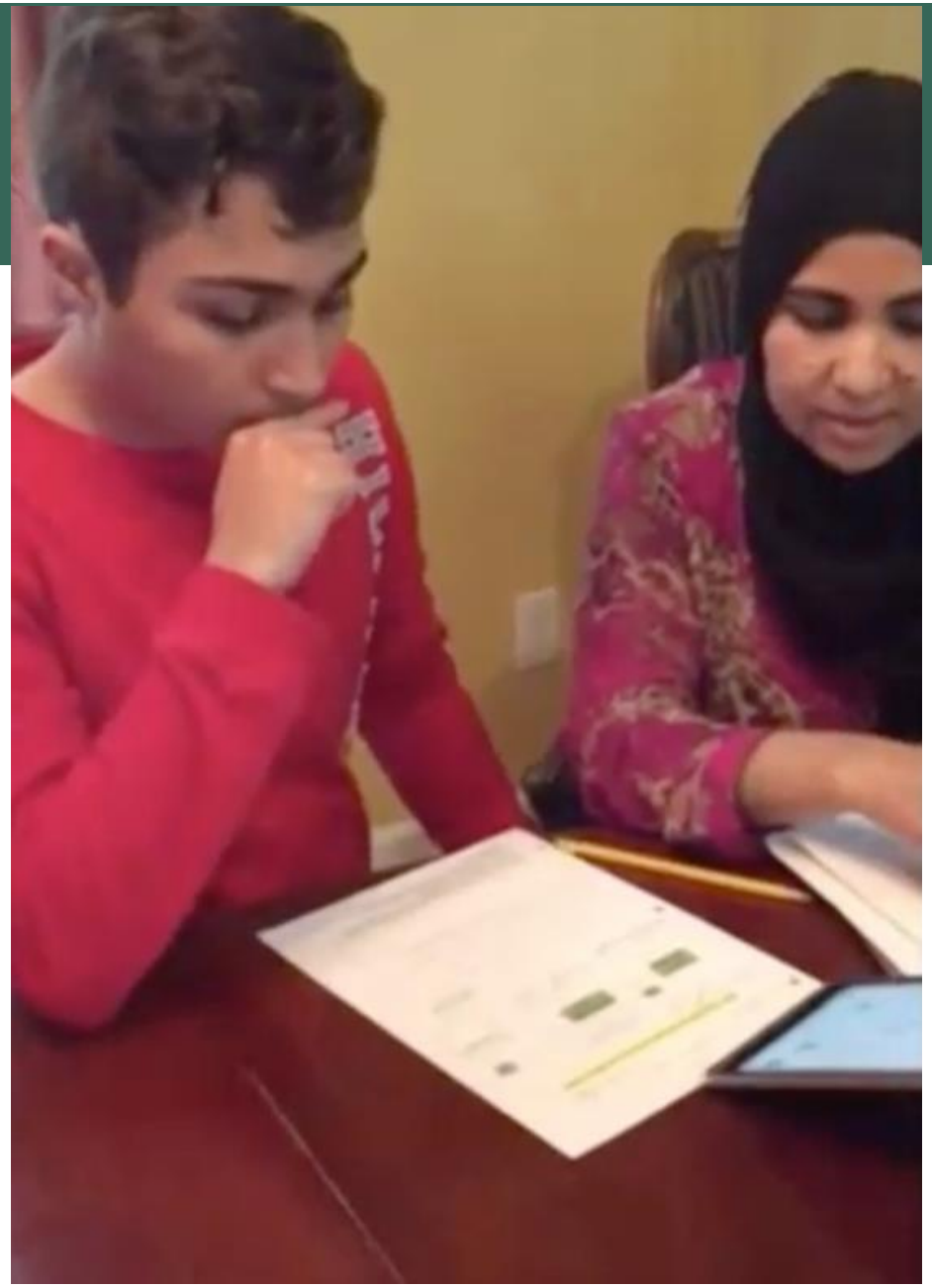
- Next, choose a couple good times to go walking or running during the upcoming week.

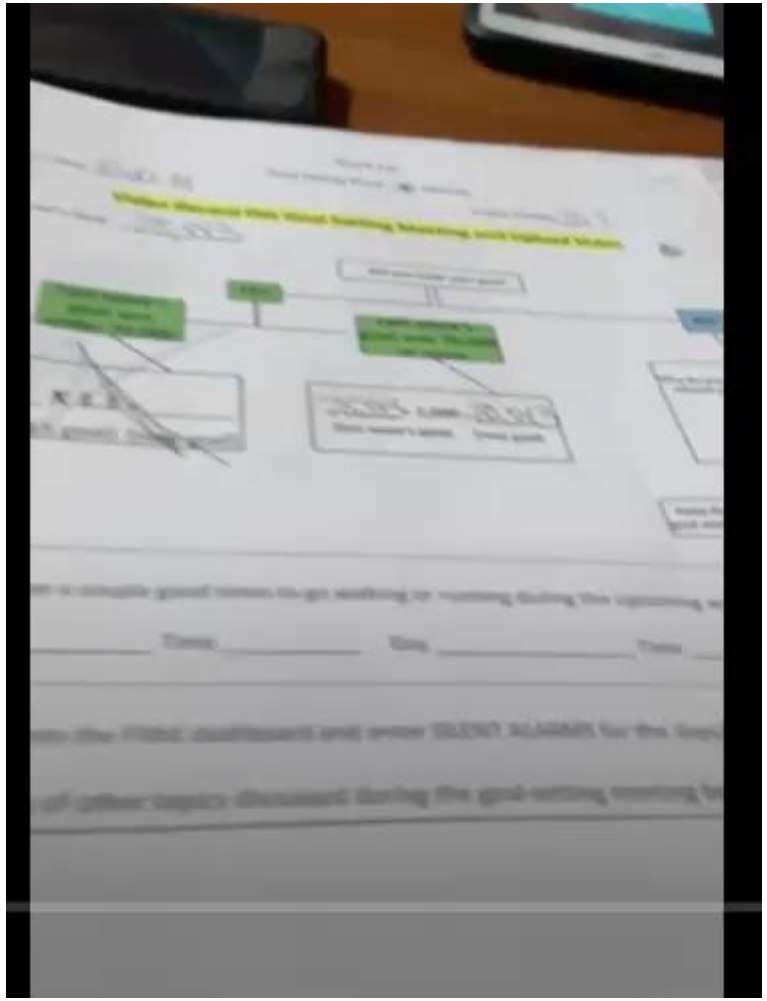
Day _____ Time _____ Day _____ Time _____

- Finally, log onto the Fitbit dashboard and enter SILENT ALARMS for the days/times above.

Please make note of other topics discussed during the goal-setting meeting below:

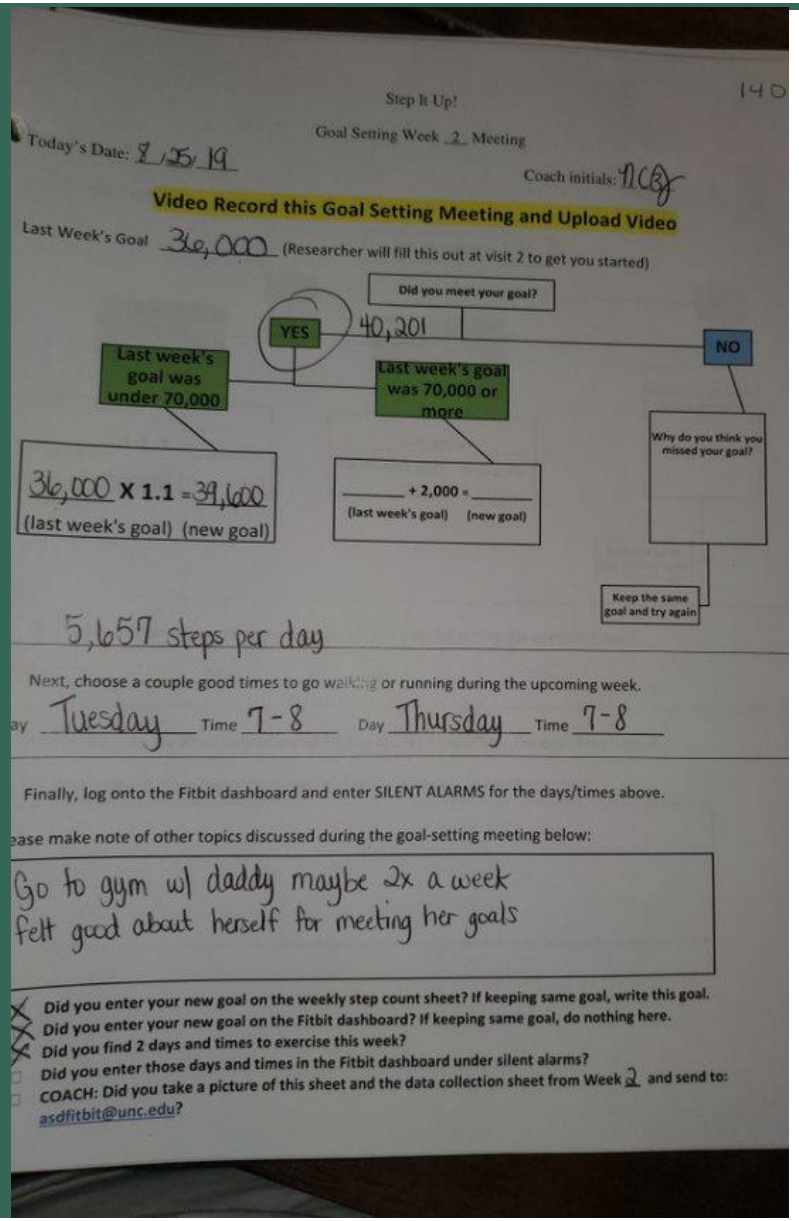
- ☐ **Did you enter your new goal on the weekly step count sheet? If keeping same goal, write this goal.**
- ☐ **Did you enter your new goal on the Fitbit dashboard? If keeping same goal, do nothing here.**
- ☐ **Did you find 2 days and times to exercise this week?**
- ☐ **Did you enter those days and times in the Fitbit dashboard under silent alarms?**
- ☐ **COACH: Did you take a picture of this sheet and the data collection sheet from Week __ and send to: asdfitbit@unc.edu?**





GOAL SETTING MEETING EXAMPLE

GOAL PROGRESS



Step It Up!

Goal Setting Week 2 Meeting

Today's Date: 8/25/19

Coach initials: MCB

Video Record this Goal Setting Meeting and Upload Video

Last Week's Goal 36,000 (Researcher will fill this out at visit 2 to get you started)

Did you meet your goal?

YES 40,201

NO

Last week's goal was under 70,000

Last week's goal was 70,000 or more

36,000 X 1.1 = 39,600 (last week's goal) (new goal)

_____ + 2,000 = _____ (last week's goal) (new goal)

Why do you think you missed your goal?

Keep the same goal and try again

5,657 steps per day

Next, choose a couple good times to go walking or running during the upcoming week.

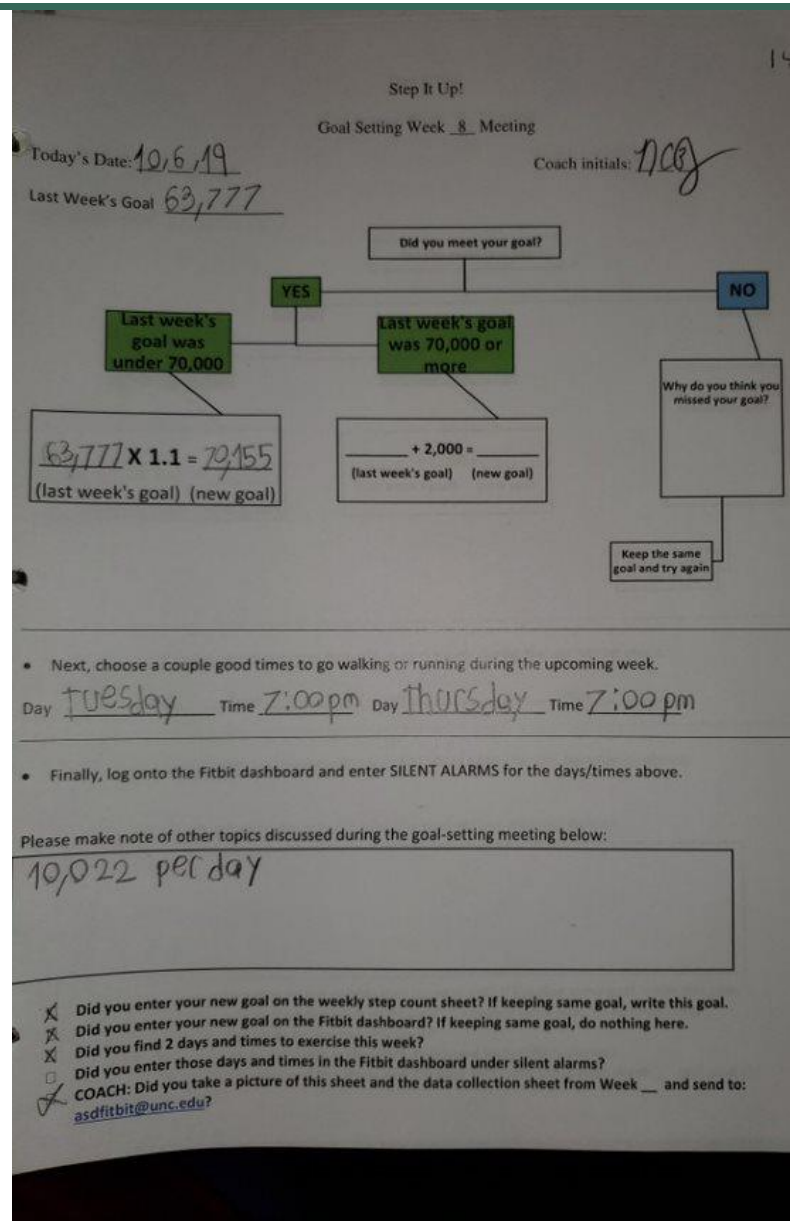
Day Tuesday Time 7-8 Day Thursday Time 7-8

Finally, log onto the Fitbit dashboard and enter SILENT ALARMS for the days/times above.

Please make note of other topics discussed during the goal-setting meeting below:

Go to gym w/ daddy maybe 2x a week
felt good about herself for meeting her goals

- [x] Did you enter your new goal on the weekly step count sheet? If keeping same goal, write this goal.
- [x] Did you enter your new goal on the Fitbit dashboard? If keeping same goal, do nothing here.
- [x] Did you find 2 days and times to exercise this week?
- [ ] Did you enter those days and times in the Fitbit dashboard under silent alarms?
- [ ] COACH: Did you take a picture of this sheet and the data collection sheet from Week 2 and send to: asdfitbit@unc.edu?



Step It Up!

Goal Setting Week 8 Meeting

Today's Date: 10/6/19

Coach initials: MCB

Last Week's Goal 63,777

Did you meet your goal?

YES

NO

Last week's goal was under 70,000

Last week's goal was 70,000 or more

63,777 X 1.1 = 70,155 (last week's goal) (new goal)

_____ + 2,000 = _____ (last week's goal) (new goal)

Why do you think you missed your goal?

Keep the same goal and try again

- Next, choose a couple good times to go walking or running during the upcoming week.

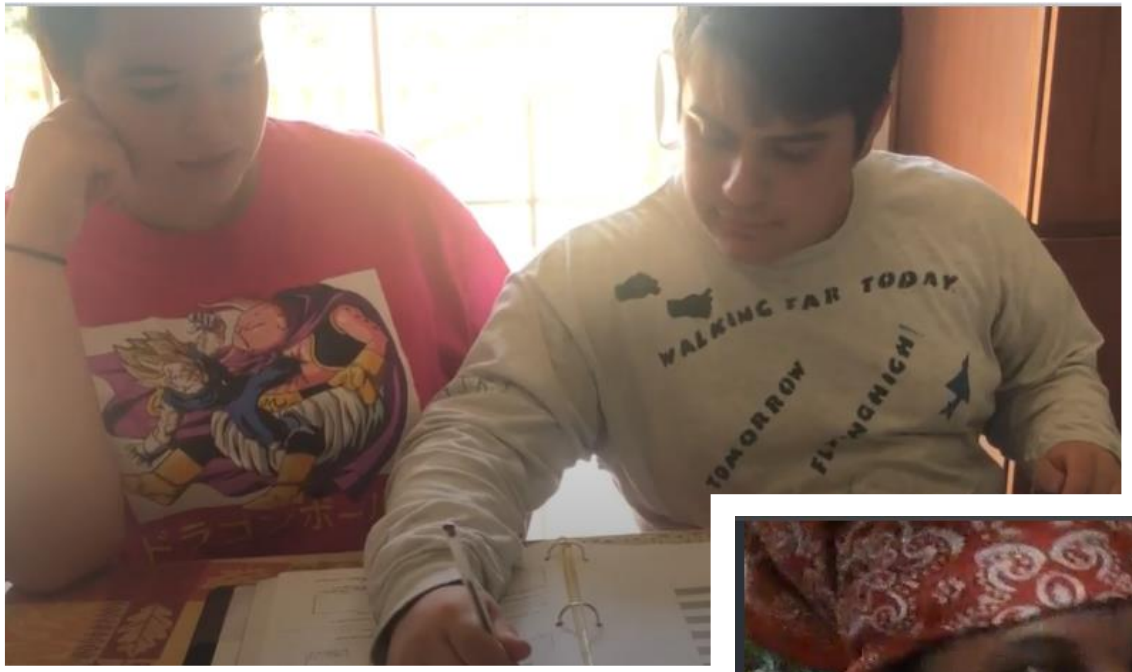
Day Tuesday Time 7:00pm Day Thursday Time 7:00pm

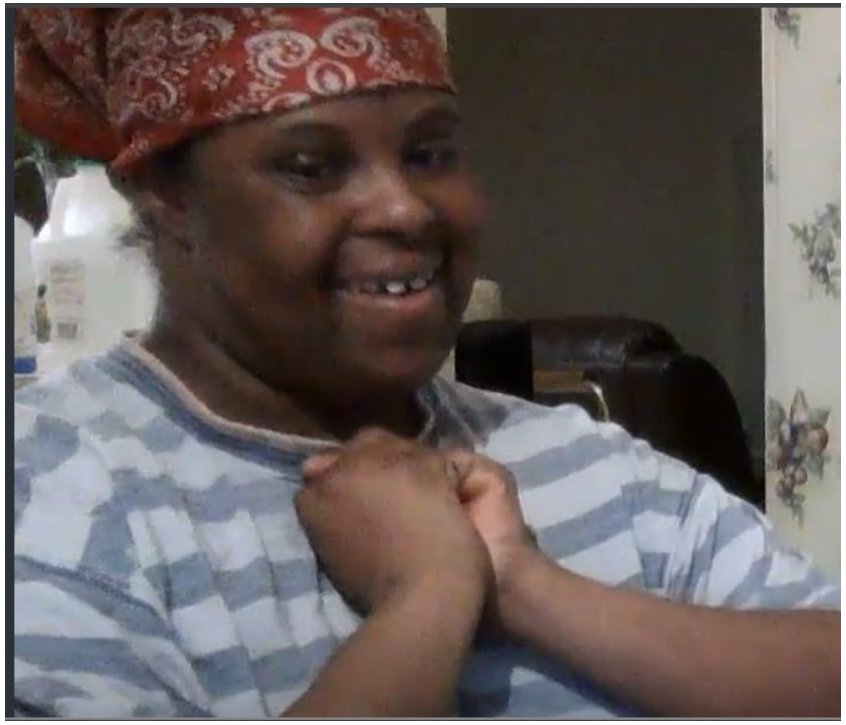
- Finally, log onto the Fitbit dashboard and enter SILENT ALARMS for the days/times above.

Please make note of other topics discussed during the goal-setting meeting below:

10,022 per day

- [x] Did you enter your new goal on the weekly step count sheet? If keeping same goal, write this goal.
- [x] Did you enter your new goal on the Fitbit dashboard? If keeping same goal, do nothing here.
- [x] Did you find 2 days and times to exercise this week?
- [ ] Did you enter those days and times in the Fitbit dashboard under silent alarms?
- [x] COACH: Did you take a picture of this sheet and the data collection sheet from Week __ and send to: asdfitbit@unc.edu?





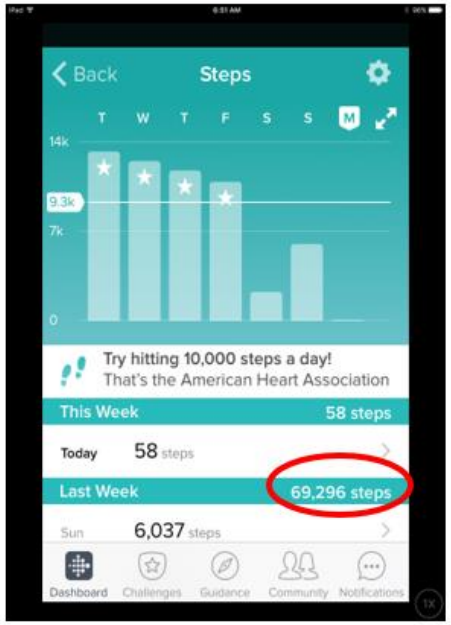
SELF-EVALUATION

THE PROCESS OF ASSESSING YOUR PERFORMANCE

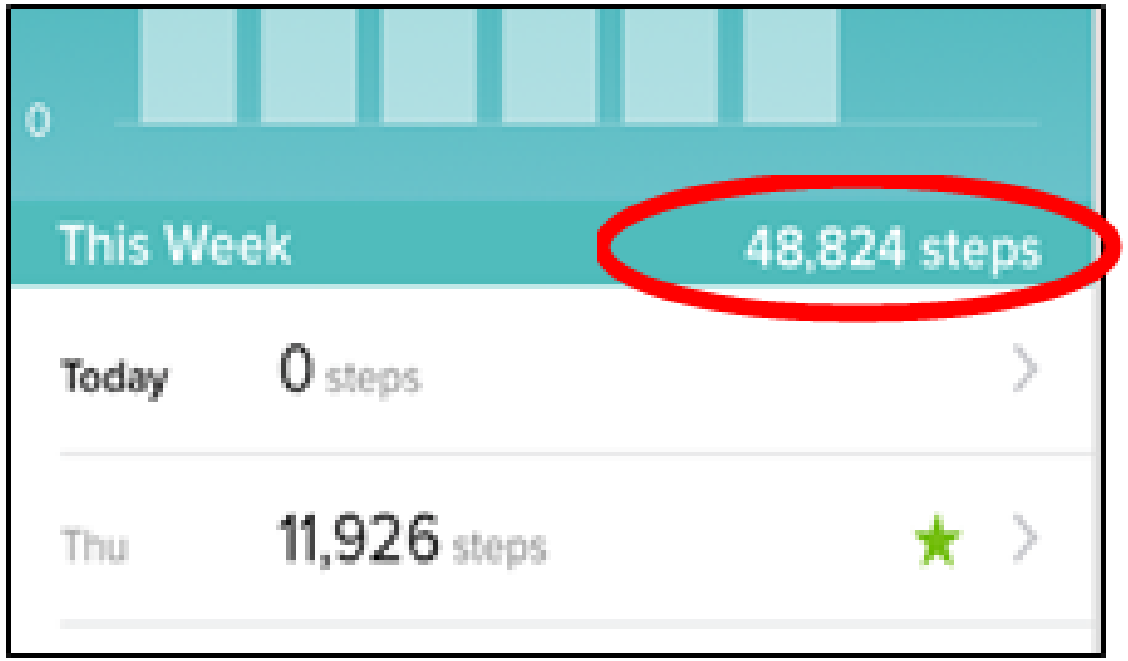
SELF-EVALUATION: DID I MEET MY GOAL?

HOW DO I KNOW IF I MET MY GOAL?

If you check your steps at the goal setting meeting…. Look at Last Week steps



SELF-EVALUATION: DID I MEET MY GOAL?



Week	Step Count Goal
Week 1	35,000
Week 2	38,500
Week 3	50,000

SELF-EVALUATION: DID I MEET MY GOAL?

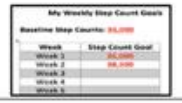
I have a New Goal… Now What?

Help Sheet: Recording Your New Goal Using the FITBIT APP

- [ ] Look at your new goal

- [ ] Write your new goal on the goal setting meeting template

- [ ] Find your weekly Step-Count Goal Sheet



- [ ] Write your new goal in the next empty box

- [ ] Now it's time to find your DAILY Goal! Type in your weekly step count goal

- [ ] Press " ÷ "

- [ ] Press " 7 "

- [ ] Press " = "

- [ ] This is your new daily step count goal! You only need to know this for the Fitbit APP.

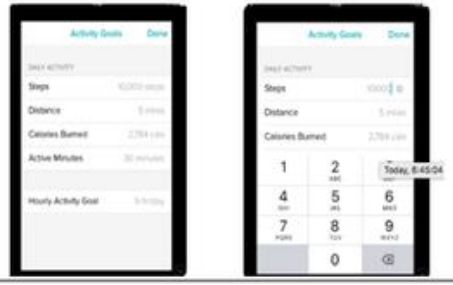
- [ ] Open the Fitbit APP

- [ ] "Log In" (may be automatic)

- [ ] Tap the Circle with the footsteps

- [ ] Tap the wheel at the top right

- [ ] Tap on your current step goal



- [ ] Press the X to delete old daily goal

- [ ] Enter new daily goal

- [ ] Tap the teal "Done" tab

CALCULATING A NEW GOAL

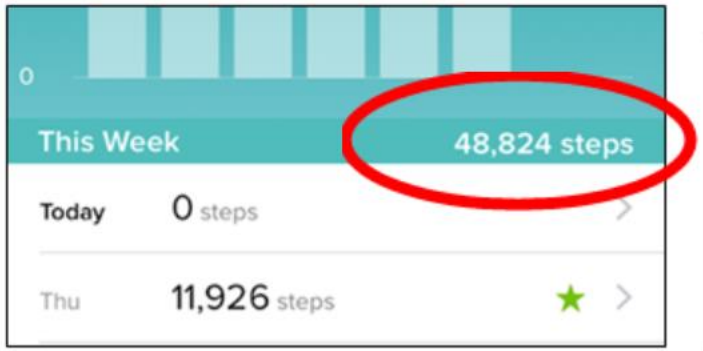
CALCULATING A NEW GOAL

SELF-MONITORING

Measuring and recording your own behavior

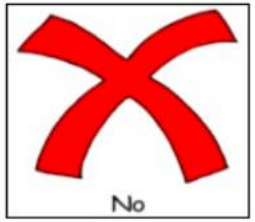
SELF-MONITORING ACTIVITY

- Think about a **goal** you are working on with your students , family members, or yourself
- How do you **self-evaluate** to know if the goal is met?
- What are two ways you could **self-monitor** throughout the week or at the end of the week?



Week	Step Count Goal
Week 1	35,000
Week 2	38,500
Week 3	50,000

OR



SELF-MONITORING EXAMPLES

TIPS

- Use technology
- Break down tasks to one step at a time
- Use visual supports
- Try pictures only
- Cover up items when working on list to simplify

Sl. no	Resolutions	2/02/13	3/02	4/02	5/02	6/02	7/02	8/02	9/02
1.	Going to restaurant only once a week (Sunday)	NA	✓	NA	NA	NA	NA	NA	✗
2.	Reading a book once a month								
3.	Running on treadmill every day for 35 minutes	✓	✗	✓	✓	✓	✓	✗	
4.	Resistance training thrice a week			✓		✓		✓	

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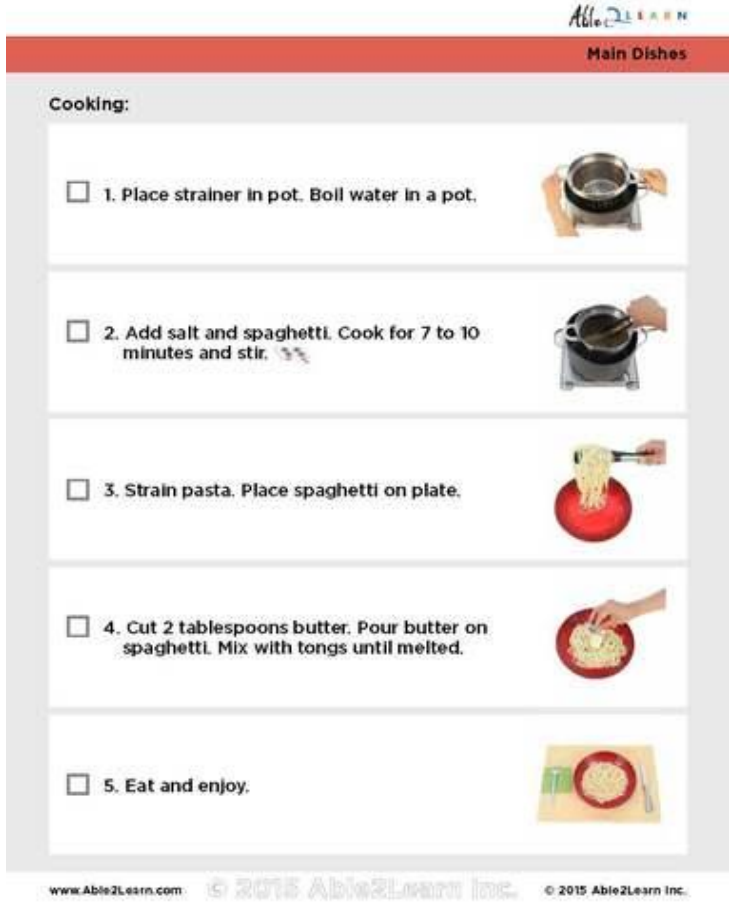

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What Do I Want to Earn When I Meet My Goal?

1. _____

2. _____

3. _____

Remember:

Pick things that are readily available in the athlete's home.

They do not have to cost money

Have the athlete pick at least one thing. If they can choose a few things that is really good to mix it up during the 12 weeks.

SELF-REINFORCEMENT

THE PROCESS OF DELIVERING YOURSELF A REINFORCER, BASED ON MEETING PERFORMANCE CRITERION.

Step It Up!

Data Collection Sheet

Week 2

Coach initials: T

Video record the athlete doing these and upload video.

Complete this form 1 time each week. Circle A or B. If you circle B, explain how you helped.
When complete, take a picture of this sheet and send them to asdfitbit@unc.edu.

1.
(A.) The participant synced the Fitbit® all by him/herself
B. The participant needed some help to sync the Fitbit®

If the participant needed help, explain how you helped:

2.
A. The participant determined if the goal was met or not met all by him/herself (self-evaluate)
(B.) The participant needed some help to determine if the goal was met or not met (self-evaluate)

If the participant needed help, explain how you helped:

I made a number chart 1-70. ~~and asked~~ told Sadie to find 35 and 36. I asked her which number was more/less. She didn't understand initially. This will be one area that I will have to teach her to compare numbers in order to determine if goal was met.

3.
A. The participant recorded if the goal was met or not met all by themselves (self-monitoring)
(B.) The participant needed some help recording if the goal was met or not met (self-monitoring)

If the participant needed help, explain how you helped:

I had to prompt Sadie. Eventually she will be able to record independently.

4.
A. The participant got his/her reinforcer all by themselves
(B.) The participant needed some help getting his/her reinforcer

If the participant needed help, explain how you helped:

of frozen yogurt

I discussed with Sadie how her stamina has improved since walking at the mall for the past 3 weekends. I decided to award her with some frozen yogurt at Menchies.

Step It Up!

Data Collection Sheet

Week 10

Coach initials: TA

Complete this form 1 time each week. Circle A or B. If you circle B, explain how you helped.
When complete, take a picture of this sheet and send them to asdfitbit@unc.edu.

1.
(A.) The participant synced the Fitbit® all by him/herself
B. The participant needed some help to sync the Fitbit®

If the participant needed help, explain how you helped:

2.
(A.) The participant determined if the goal was met or not met all by him/herself (self-evaluate)
B. The participant needed some help to determine if the goal was met or not met (self-evaluate)

If the participant needed help, explain how you helped:

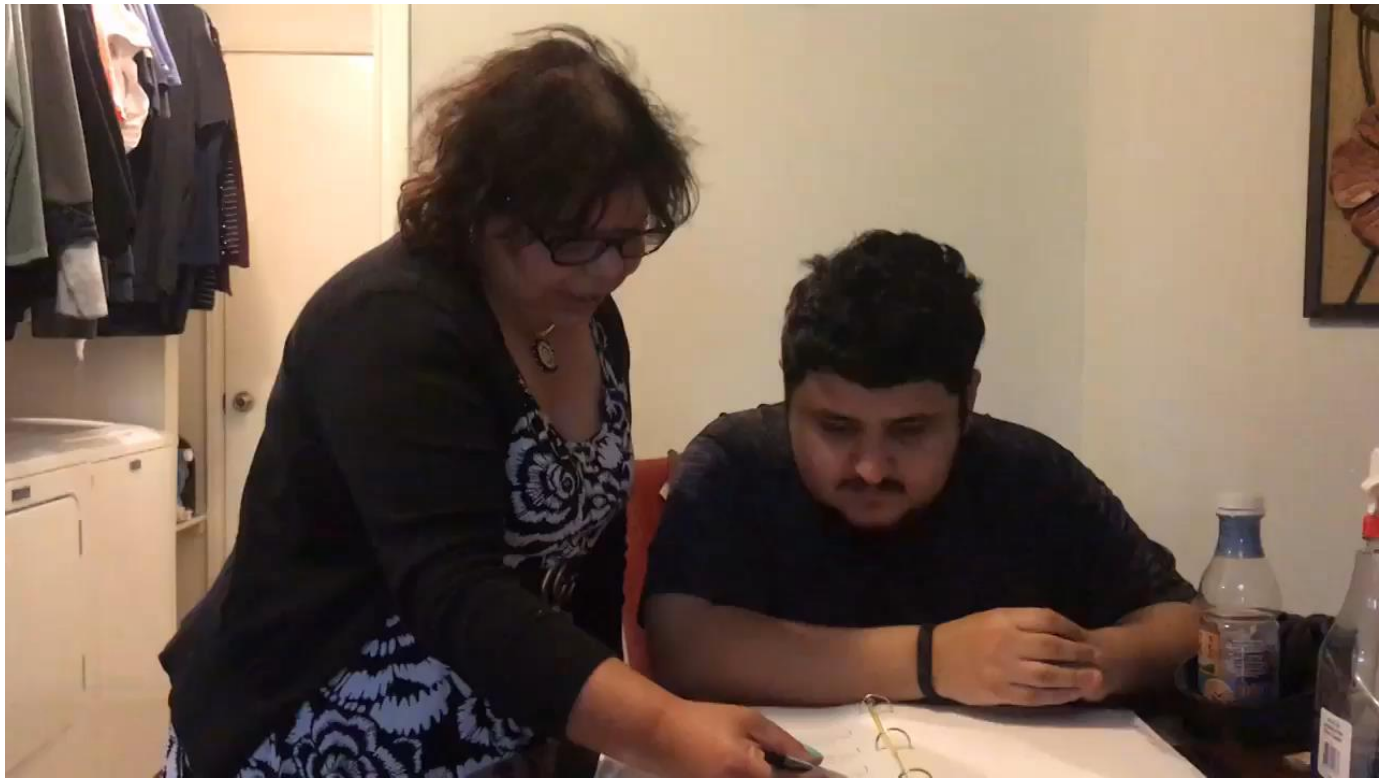
3.
(A.) The participant recorded if the goal was met or not met all by themselves (self-monitoring)
B. The participant needed some help recording if the goal was met or not met (self-monitoring)

If the participant needed help, explain how you helped:

4.
(A.) The participant got his/her reinforcer all by themselves
B. The participant needed some help getting his/her reinforcer

If the participant needed help, explain how you helped:

DATA COLLECTION EXAMPLE



STEP IT UP GOAL SETTING AND ATTAINMENT

Self-Evaluate

If previous goal met, calculate new goal

If previous goal not met, keep same goal

Write the New Goal

Write new goal on goal setting sheet

Enter new goal on Fitbit App

Create an Action Plan

Schedule 2 exercise days and times

Set alarms for exercise days/times

Self-Monitor

Wear Fitbit daily

Evaluate progress

Adjust plan as needed

Self-Reinforce

If goal met, self-reinforce with predetermined reinforcer

If goal not met, try again next week

OBJECTIVES

Describe	Describe the successes and challenges of using goal setting to promote self-management.	
Identify	Identify evidence-based practices that may support individuals to be more independent in self-management.	
Use	Use evidence-based practices such as creating self-monitoring checklists to promote self-management strategies	

PROMOTING USE OF SELF-MANAGEMENT STRATEGIES IN ADULTS WITH AUTISM SPECTRUM DISORDER AND INTELLECTUAL DISABILITY

- Brianne Tomaszewski, PhD
- briannet@unc.edu

CSESA

The Center on Secondary Education for Students with Autism Spectrum Disorders